FIG. 1A

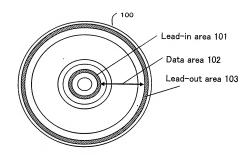


FIG. 1B

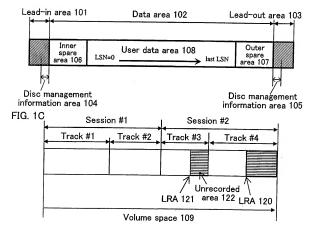


FIG. 2A

Session management information 200

Header information 201

Track management information #1

Track management information #2

Track management information #3

Track management information #3

Track management information #4

FIG. 2B
Track management information 210

Session start information 211 Track start Last recorded addres information 211 Information 212 (LRA) 213
--

FIG. 2C Space bitmap management information 220

Header information 221

Managed area information 222

Space bitmap information 223

FIG.3

Disc structure information 1100

General information 1101		
Replacement management information list location information 1102		
User area start location information 1103		
User area end location information 1104		
Spare area information 1105		
Recording mode information 1106		
Last recorded address information 1107		
Disc management information area information 1107b		
Spare area management information 1108		
Session management information location information 1109		
Space bitmap management information location information 1110		

FIG.4

100b

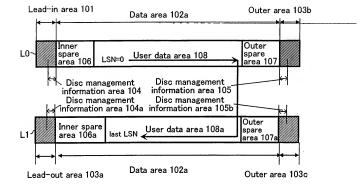


FIG.5A

Replacement management information list 1000

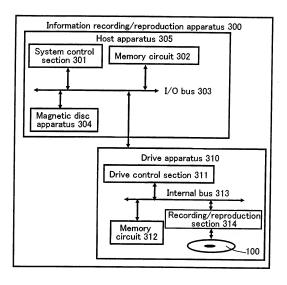
Header information 1001					
Replacement management information #1					
Replacement management information #2					
Replacement management information #3					
•••					
Terminator information					
00h					

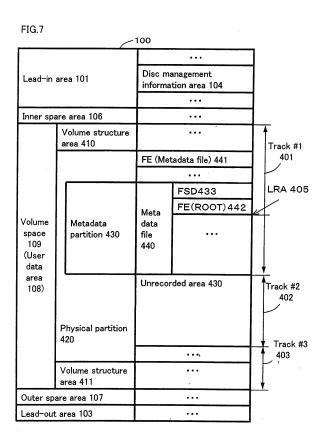
FIG.5B

Replacement management information 1010

Status information 1011	Original location information 1012	Replacement location information 1013
-------------------------------	------------------------------------	---

FIG.6





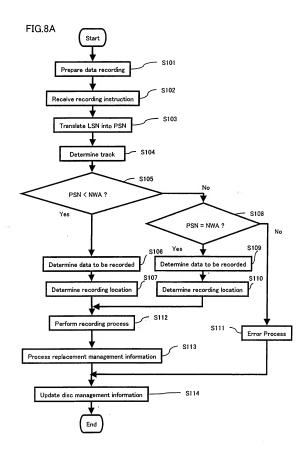
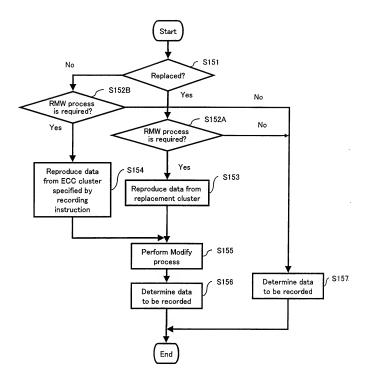
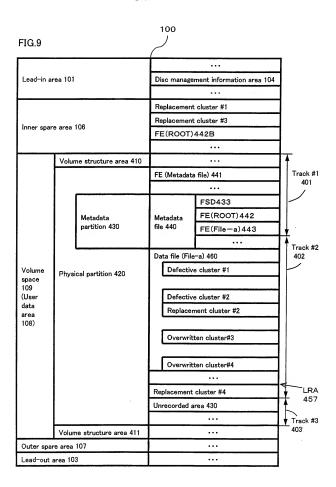


FIG.8B





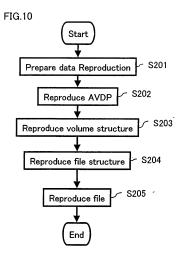


FIG.11 Replacement management information 1010B

Status information 1011		ation	Original location	Replacement location	Туре
Flag1	Flag2	Flag3	mornadon 1012	information 1013	
0	0	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in Spare area)	(1)
0	0	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in Spare area)	(2)
0	0	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in Spare area)	(3)
0	1	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in User data area)	(4)
0	1	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in User data area)	(5)
0	1	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in User data area)	(6)
1	0	00	Defective cluster location information		(7)

Flag1 For replacement: 0 For defect: 1

Flag2

Replace in Spare area or no replacement cluster: 0 Replace in User data area: 1

Flag3

Single cluster : 00 Contiguous clusters (start location) : 01 Contiguous clusters (end location) : 10

FIG. 12

Physical address space

	i iliyolodi do	a. ooo opaoo			
	PSN	Data]		
	100-131	(Unrecorded)	↓		
	132-163	(Unrecorded)	ECC	Cluster	
	164-195	(Unrecorded)	1		
Inner spare	196-227	(Unrecorded)		Logical	address space
↑ area 106	•••			LSN	Data
↓ User data	1100-1131	(Unrecorded)	← →	0-31	(Unrecorded)
* area 108	1132-1163	(Unrecorded)	↓ →	32-63	(Unrecorded)
LRA 500	1164-1195	(Unrecorded)		64-95	(Unrecorded)
Tuesda #1	1196-1227	(Unrecorded)		96-127	(Unrecorded)
Track #1	1228-1259	(Unrecorded)		128-159	(Unrecorded)
	1260-1291	(Unrecorded)		160-191	(Unrecorded)
	1292-1323	(Unrecorded)		192-223	(Unrecorded)
	1324-1355	(Unrecorded)]	224-255	(Unrecorded)
	1336-1382	(Unrecorded)] !	256-287	(Unrecorded)
•	•••	•••		•••	•••

FIG. 13A

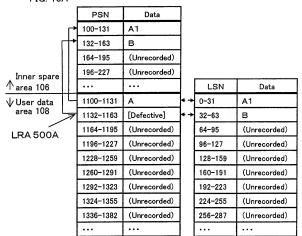


FIG. 13B

	itus ormat	ion	Original location	Replacement location	
0	0	00	1100	100	511
0	0	00	1132	132	512

1000A

FIG. 14A

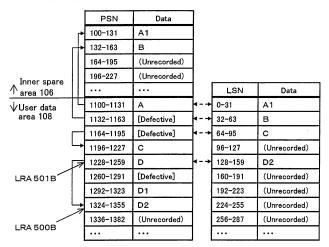


FIG. 14B 1000B Status Original Replacement location information location იი 514A

FIG. 15A

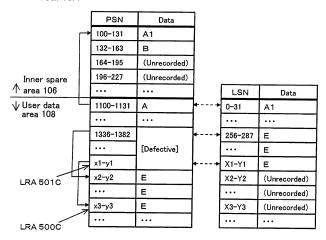
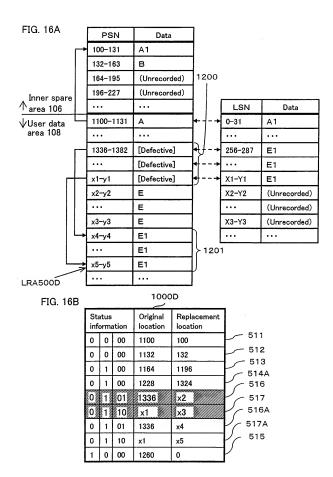


FIG. 15B 1000C Status Original Replacement information location location , 511 _{_} 513 - 514A - 516 x2 x1 хЗ 一 517



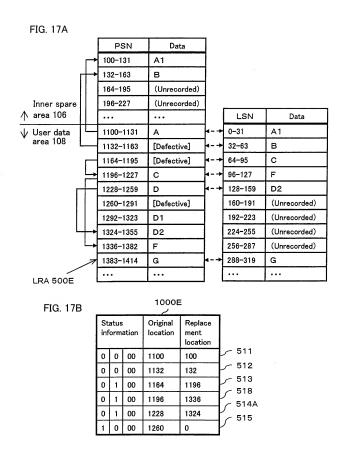
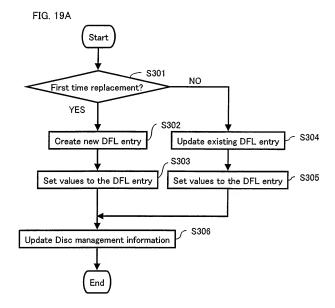


FIG. 18

DFL entry 2010

Status 1	Defective cluster	Status 2	Replacement cluster
2011A	first PSN 2012	2011B	first PSN 2013



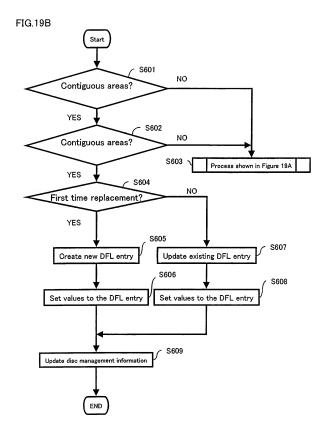


FIG. 20A

	PSN	Data
	1000-1131	AO
LRA	1132-1163	(Unrecorded)
LNA	1164-1195	(Unrecorded)
	1196-1227	(Unrecorded)
	1228-1259	(Unrecorded)
	1260-1291	(Unrecorded)
	1292-1323	(Unrecorded)
User data	1324-1355	(Unrecorded)
↑ area 108 V Outer spare	•••	•••
	x10-y10	•••
area 107		

LSN	Data
0-31	A0
32-63	(Unrecorded)
64-95	(Unrecorded)
96-127	(Unrecorded)
128-159	(Unrecorded)
160-191	(Unrecorded)
192-223	(Unrecorded)
224-255	(Unrecorded)
	•••

FIG. 20B

Header information 1001

FIG. 21A

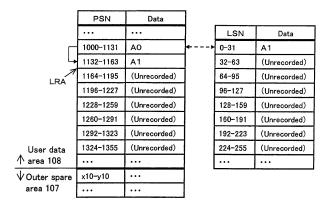


FIG. 21B

Header	informati	on 1001		C 2100A
0000	1000	0000	1132] 2100A

FIG. 22A

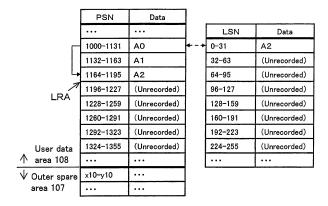


FIG. 22B

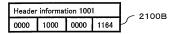


FIG. 23A

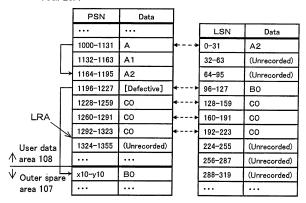


FIG. 23B

L	Header				
E	0000	1000	0000	1164	2100B حر
	0000	1196	0000	x10	2101A

FIG. 24A

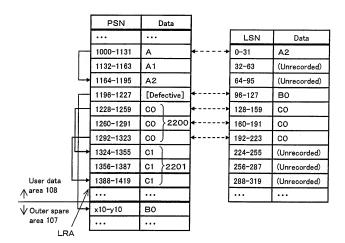


FIG. 24B

Header	Ī			
0000	1000	0000	1164	2100B
0000	1196	0000	x10	2101A
0000	1228	0001	1324	2102A س
0000	1292	0010	1388	∠ 2103A

FIG. 25

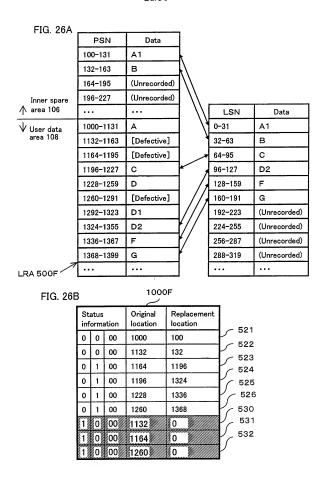
3210

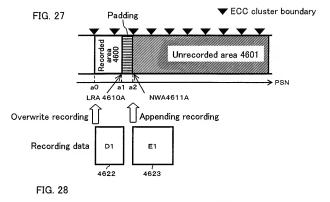
Session start information 211

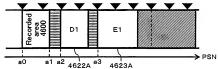
Track start location information 212

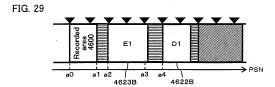
Last recorded address information within track (LRA) 213

Last recorded logical address information within track 3214









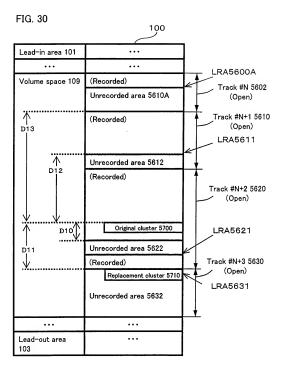


FIG. 31

. . . Lead-in area Disc management structure 2 Spare area ... Volume structure ... area 3 FE (Metadata file) 7a FSD12 FE(ROOT)13 FE(Dir-A) Metadata Metadata FE(Dir-B) partition 5a file 6a FE(File-a) FE(File-b) Volume Unrecorded area 11a space 2 FE (Metadata mirror file) 7b Metadata Metadata (Duplication of partition 5b mirror Metadata file 440) file 6b Unrecorded area 11b Data file (File-a) 8 Data file (File-b) 9 Physical partition 4 Unrecorded area 11c Volume structure ... area 3b

FIG. 32

. Id. 02					
Lead-in area					
		Disc management structure 2			
Spare area 17					
		FE(ROOT)16			
	Volume structure area 3		•••		
			FE (Metadata file) 7a		
			Metadata file 6a	FSD12	
		Metadata partition 5a		FE(ROOT)13	
				FE(Dir-A)	
				FE(Dir-B)	
				FE(File-a)	
				FE(File-b)	
Volume				FE(File-c)14	
space 2				Unrecorded area 11a	
	١.		FE (Metadata	a mirror file) 7b	
		Metadata partition 5b	Metadata mirror file 6b	(Duplication of Metadata file 440)	
				Unrecorded area 11b	
		Data file (File-a) 8			
	Physical partition 420		Data file (File-b) 9		
			Data file (File-c) 15		
			Unrecorded area 11c		
	Volume structure area 3b				

FIG. 33A

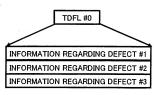


FIG. 33B

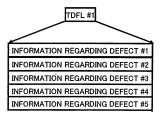


Fig.34

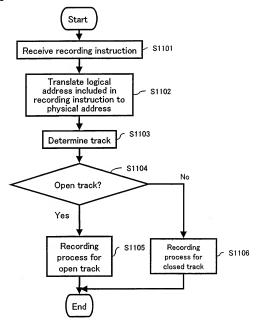


Fig.35A

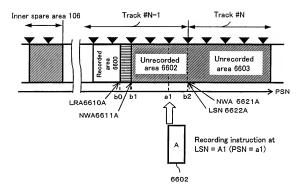


Fig.36A

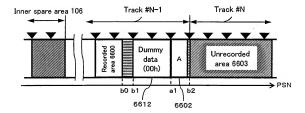


Fig.37A

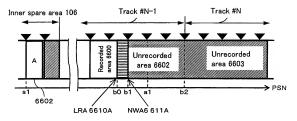


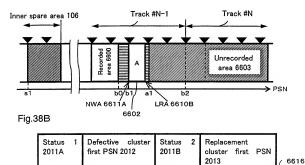
Fig.37B

	Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	√ 6615
į	0000	a1	0000	s1	γ

Fig.38A

0000

a1



0000

ь1

Fig.39A

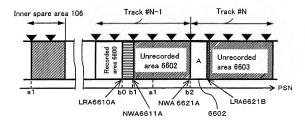


Fig.39B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	7615
0000	a1	0000	b2	ľ

Fig.40A

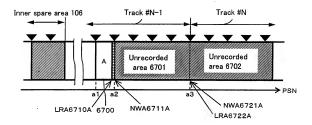


Fig.41A

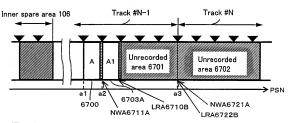


Fig.41B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	6730
0000	a1	0000	a2	Y

Fig.42A

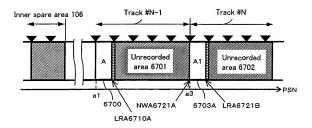


Fig.42B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	6733
0000	a1	0000	a3	ľ

Fig.43

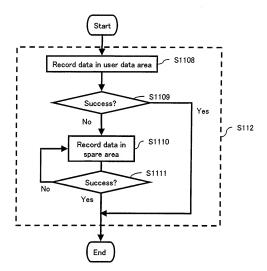


Fig.44A

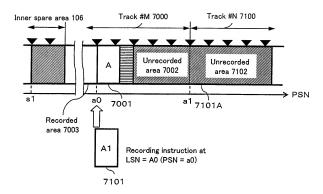


Fig.45A

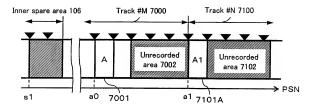


Fig.45B

Status 1 2011A	Defective cluster first PSN 2012		Replacement cluster first PSN 2013	√ 7200
0000	a0	0000	a1	Y 7200

Fig.46A

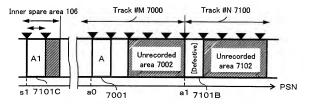


Fig.46B

Stat 201		Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	7201
000	00	a0	0000	s1	ľ

Fig.47

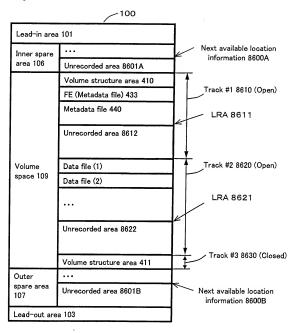


Fig.48

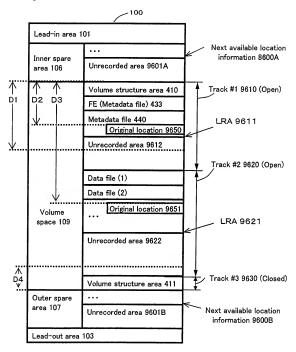


Fig.49A

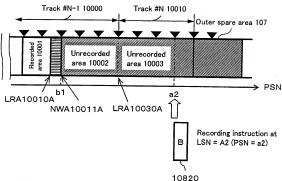


Fig.50A

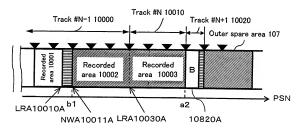


Fig.51A

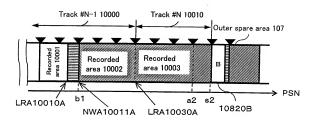


Fig.51B

		Stati orma		Original location	Replacement location	
[10817
	0	0	00	a2	s2	Y

Fig.52A

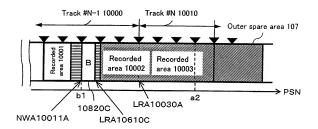


Fig.52B

	itus orma	tion	Original location	Replacement location	
					/ 10819
0	1	00	b1	0	10818
0	0	00	a2	b1	Y

Fig.53A

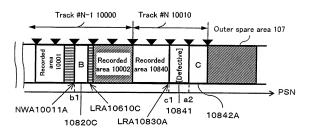


Fig.53B

		Stat	us ation	Original location	Replacement location	
				•••		10819
	0	0	00	b1	0	10820
	0	1	00	c1	a2	10818
I	0	1	00	a2	b1	\vee
				•••		

Fig.54

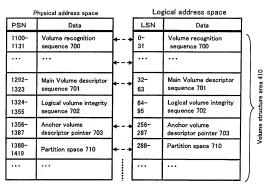


Fig.55

PSN	Data]	LSN	Data
1100- 1131	Volume recognition sequence 700	 +	0- 31	Volume recognition sequence 700
•••			•••	
1292- 1323	[Defective]	/	32- 63	Main Volume descriptor sequence 701
1324 - 1355	Main Volume descriptor sequence 701		64- 95	Logical volume integrity sequence 702
1356- 1387	Logical volume integrity sequence 702	Y,	256- 287	Anchor volume descriptor pointer 703
1388- 1419	[Defective]	//	288-	Partition space 710
1420- 1451	Anchor volume descriptor pointer 703	Y /		•••
1452- 1483	Partition space 710	'		·
•••				

Fig.56

